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=> s asphalt and emulsion and (aerosol or atomiz?) and coal

23142 ASPHALT  
3410 ASPHALTS  
24128 ASPHALT  
(ASPHALT OR ASPHALTS)  
171814 EMULSION  
101920 EMULSIONS  
208076 EMULSION  
(EMULSION OR EMULSIONS)  
48149 AEROSOL  
37753 AEROSOLS  
58644 AEROSOL  
(AEROSOL OR AEROSOLS)  
32345 ATOMIZ?  
196148 COAL  
34034 COALS  
199485 COAL  
(COAL OR COALS)

L1 0 ASPHALT AND EMULSION AND (AEROSOL OR ATOMIZ?) AND COAL

=> s asphalt and emulsion and coal

23142 ASPHALT  
3410 ASPHALTS  
24128 ASPHALT  
(ASPHALT OR ASPHALTS)  
171814 EMULSION  
101920 EMULSIONS  
208076 EMULSION  
(EMULSION OR EMULSIONS)  
196148 COAL  
34034 COALS  
199485 COAL  
(COAL OR COALS)

L2 219 ASPHALT AND EMULSION AND COAL

=> s 12 and spray?  
208285 SPRAY?  
L3 29 L2 AND SPRAY?

=> d 13 1-29 ti

L3 ANSWER 1 OF 29 CAPLUS COPYRIGHT 2002 ACS

TI Surface-processing agent for piles of **coal** or petroleum coke under open-air storage

L3 ANSWER 2 OF 29 CAPLUS COPYRIGHT 2002 ACS

TI Dust suppression by **spraying** soil with surfactant-containing **emulsion** and solution

L3 ANSWER 3 OF 29 CAPLUS COPYRIGHT 2002 ACS

TI Combined method for simultaneously dewatering and reconstituting finely divided carbonaceous material

L3 ANSWER 4 OF 29 CAPLUS COPYRIGHT 2002 ACS

TI Waterproofing coatings for outdoor piles

L3 ANSWER 5 OF 29 CAPLUS COPYRIGHT 2002 ACS

TI Stable lignosulfonate **emulsion**

L3 ANSWER 6 OF 29 CAPLUS COPYRIGHT 2002 ACS

TI **Coal** ash solid board for pavement

L3 ANSWER 7 OF 29 CAPLUS COPYRIGHT 2002 ACS

TI Moisture control in **coal** during outdoor storage

L3 ANSWER 8 OF 29 CAPLUS COPYRIGHT 2002 ACS

TI Moisture-controlling **emulsion** for outdoor storage of **coal**

L3 ANSWER 9 OF 29 CAPLUS COPYRIGHT 2002 ACS

TI Emulsified fuels of viscous oils

L3 ANSWER 10 OF 29 CAPLUS COPYRIGHT 2002 ACS

TI Coating preventing autoignition of **coal**

L3 ANSWER 11 OF 29 CAPLUS COPYRIGHT 2002 ACS

TI Control of dust during **coal** transportation

L3 ANSWER 12 OF 29 CAPLUS COPYRIGHT 2002 ACS

TI Dust preventives containing **asphalt emulsions**

L3 ANSWER 13 OF 29 CAPLUS COPYRIGHT 2002 ACS

TI **Coal** dust scattering preventative

L3 ANSWER 14 OF 29 CAPLUS COPYRIGHT 2002 ACS

TI Prevention of self-combustion in thermally treated coke briquets

L3 ANSWER 15 OF 29 CAPLUS COPYRIGHT 2002 ACS

TI Coating of ore pellets with bituminous **emulsions** to prevent abrasive degradation

L3 ANSWER 16 OF 29 CAPLUS COPYRIGHT 2002 ACS

TI Possibilities of utilizing petroleum **asphalts** in molding mixtures for gray iron castings

L3 ANSWER 17 OF 29 CAPLUS COPYRIGHT 2002 ACS

TI Comparing coatings in shallow and deep ocean environments

L3 ANSWER 18 OF 29 CAPLUS COPYRIGHT 2002 ACS  
 TI American Society for Testing Materials, Standards, 1955, IV. Paint, naval stores, cellulose, wax polishes, wood, acoustical materials, sandwich and building constructions, fire tests

L3 ANSWER 19 OF 29 CAPLUS COPYRIGHT 2002 ACS  
 TI American Society for Testing Materials, Standards, 1952. V. Fuels, petroleum, aromatic hydrocarbons, engine antifreezes

L3 ANSWER 20 OF 29 CAPLUS COPYRIGHT 2002 ACS  
 TI American Society for Testing Materials, Standards, 1952. IV. Paint, naval stores, wood, sandwich constructions, building constructions, fire tests

L3 ANSWER 21 OF 29 CAPLUS COPYRIGHT 2002 ACS  
 TI **Asphalt emulsion spray** for rendering coal dustproof

L3 ANSWER 22 OF 29 CAPLUS COPYRIGHT 2002 ACS  
 TI Asphaltic **emulsion**

L3 ANSWER 23 OF 29 CAPLUS COPYRIGHT 2002 ACS  
 TI Soluble high-molal oxyalkylated esters adapted for demulsifying crude-oil **emulsions** and various other similar uses

L3 ANSWER 24 OF 29 CAPLUS COPYRIGHT 2002 ACS  
 TI American Society for Testing Materials, Standards, 1942. II. Nonmetallic materials, constructional

L3 ANSWER 25 OF 29 CAPLUS COPYRIGHT 2002 ACS  
 TI Soap-what new uses?

L3 ANSWER 26 OF 29 CAPLUS COPYRIGHT 2002 ACS  
 TI American Society for Testing Materials, Tentative Standards

L3 ANSWER 27 OF 29 CAPLUS COPYRIGHT 2002 ACS  
 TI American Society for Testing Materials, Tentative Standards

L3 ANSWER 28 OF 29 CAPLUS COPYRIGHT 2002 ACS  
 TI Bituminous pipe coatings

L3 ANSWER 29 OF 29 CAPLUS COPYRIGHT 2002 ACS  
 TI Road Dust: Its Control and Prevention

=> d 13 1-16, 21,22,25 all

L3 ANSWER 1 OF 29 CAPLUS COPYRIGHT 2002 ACS  
 AN 2002:63690 CAPLUS  
 DN 136:104960  
 TI Surface-processing agent for piles of **coal** or petroleum coke under open-air storage  
 IN Takagi, Fumiaki; Takeshita, Hidenori  
 PA Idemitsu Kosan Co., Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 5 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 IC ICM C10L005-00  
 ICS B65G003-02; C09K003-18; C09K003-22  
 CC 51-24 (Fossil Fuels, Derivatives, and Related Products)

Section cross-reference(s): 42

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2002020769	A2	20020123	JP 2000-210942	20000712
AB	The agent comprises (A) 30-95 wt.% of <b>asphalt emulsion</b> comprising <b>asphalt</b> 30-70, surfactant 0.5-10, and H2O 20-69.5 wt.% and (B) 5-70 wt.% of high-concn. polymer <b>emulsion</b> contg. 30-70 wt.% polymers. The agent is <b>sprayed</b> onto the piles of <b>coal</b> or petroleum coke for prevention of their scattering, flowing-out, or penetration of rainwater into them.				
ST	<b>asphalt</b> polymer surface processing agent <b>coal</b> petroleum coke pile				
IT	Coating materials (surface-processing agent for covering piles of <b>coal</b> or petroleum coke under open-air storage)				
IT	<b>Coal</b> , processes Petroleum coke RL: PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process) (surface-processing agent for covering piles of <b>coal</b> or petroleum coke under open-air storage)				
IT	Acrylic polymers, uses <b>Asphalt</b> RL: TEM (Technical or engineered material use); USES (Uses) (surface-processing agent for covering piles of <b>coal</b> or petroleum coke under open-air storage)				
IT	108-05-4D, Vinyl acetate, polymers with maleate 110-16-7D, Maleic acid, derivs., polymers with vinyl acetate 7732-18-5, Water, uses 9002-92-0, Polyoxyethylene monolauryl ether 9003-20-7, Vinyl acetate homopolymer 9003-55-8, Butadiene-styrene copolymer 24937-78-8, Ethylene-vinyl acetate copolymer 25085-34-1, Acrylic acid-styrene copolymer RL: TEM (Technical or engineered material use); USES (Uses) (surface-processing agent for covering piles of <b>coal</b> or petroleum coke under open-air storage)				
L3	ANSWER 2 OF 29 CAPLUS COPYRIGHT 2002 ACS				
AN	1995:756306 CAPLUS				
DN	123:151712				
TI	Dust suppression by <b>spraying</b> soil with surfactant-containing <b>emulsion</b> and solution				
IN	Matsuda, Naomichi; Takahashi, Fujio				
PA	Nippon Oils & Fats Co Ltd, Japan				
SO	Jpn. Kokai Tokkyo Koho, 6 pp. CODEN: JKXXAF				
DT	Patent				
LA	Japanese				
IC	ICM B65G003-02 ICS C09K003-22				
CC	59-6 (Air Pollution and Industrial Hygiene) Section cross-reference(s): 58				

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 07117823	A2	19950509	JP 1993-287596	19931021
AB	Soil is <b>sprayed</b> with an <b>emulsion</b> of bituminous substance contg. a 1st ionic surfactant (e.g., octadecylamine acetate) and with an aq. soln. of a 2nd ionic surfactant (e.g., Na dodecylbenzenesulfonate) having ionicity inversed to that of the 1st surfactant.				
ST	dust suppression <b>asphalt emulsion</b> surfactant; ionic surfactant dust suppression; octadecylamine acetate surfactant dust				

suppression; sodium dodecylbenzenesulfonate surfactant dust suppression  
 IT Soils  
   (dust suppression by **spraying** soil with surfactant-contg.  
   **emulsion** and soln.)  
 IT **Asphalt**  
   RL: NUU (Other use, unclassified); USES (Uses)  
   (dust suppression by **spraying** soil with surfactant-contg.  
   **emulsion** and soln.)  
 IT Petroleum products  
   (arom. oils, dust suppression by **spraying** soil with  
   surfactant-contg. **emulsion** and soln.)  
 IT Tar  
   RL: NUU (Other use, unclassified); USES (Uses)  
   (**coal**, dust suppression by **spraying** soil with  
   surfactant-contg. **emulsion** and soln.)  
 IT Air purification  
   (dust suppression, dust suppression by **spraying** soil with  
   surfactant-contg. **emulsion** and soln.)  
 IT Surfactants  
   (ionic, dust suppression by **spraying** soil with  
   surfactant-contg. **emulsion** and soln.)  
 IT 2190-04-7, Octadecylamine acetate 25155-30-0, Sodium  
   dodecylbenzenesulfonate  
   RL: MOA (Modifier or additive use); USES (Uses)  
   (dust suppression by **spraying** soil with surfactant-contg.  
   **emulsion** and soln.)  
 IT 112-02-7, Hexadecyltrimethylammonium chloride 112-03-8,  
   Octadecyltrimethylammonium chloride 139-08-2 143-19-1, Sodium oleate  
   577-11-7, Sodium dioctylsulfosuccinate 32612-48-9 70353-34-3  
   RL: MOA (Modifier or additive use); USES (Uses)  
   (surfactant; dust suppression by **spraying** soil with  
   surfactant-contg. **emulsion** and soln.)

L3 ANSWER 3 OF 29 CAPLUS COPYRIGHT 2002 ACS

AN 1991:27127 CAPLUS

DN 114:27127

TI Combined method for simultaneously dewatering and reconstituting finely  
 divided carbonaceous material

IN Wen, Wu Wey; Deurbrouck, Albert W.

PA United States Dept. of Energy, USA

SO U.S., 11 pp.

CODEN: USXXAM

DT Patent

LA English

IC ICM C10L005-16

NCL 044568000

CC 51-17 (Fossil Fuels, Derivatives, and Related Products)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4969928	A	19901113	US 1989-318567	19890303
	US 318567	A0	19901215		

AB A finely divided carbonaceous material (e.g., **coal**) is dewatered  
 and reconstituted in a combined process by adding a binding agent, e.g.,  
 aq. **asphalt emulsion**, directly into slurry of finely  
 divided material and dewatering the material to form a cake or  
 consolidated piece which can be hardened by drying at ambient or elevated  
 temps. Alternatively, the binder often in the form of a crusting agent is  
**sprayed** onto the surface of a moist cake prior to curing.

ST **coal** dewatering reconstitution binding agent; **asphalt**  
**emulsion coal** dewatering reconstitution

IT **Coal** treatment

(dewatering-reconstitution, in slurry, binding agent for,  
**asphalt emulsion** as)

IT **Asphalt**

RL: USES (Uses)

(**emulsions**, binders, for dewatering-reconstituting finely  
divided carbanaceous materials)

L3 ANSWER 4 OF 29 CAPLUS COPYRIGHT 2002 ACS

AN 1988:133584 CAPLUS

DN 108:133584

TI Waterproofing coatings for outdoor piles

IN Shinkawa, Naohito; Akiyama, Yoshinori; Tanaka, Takehiko; Shibuno, Takeshi

PA Nippon Steel Corp., Japan; Nitto Electric Industrial Co., Ltd.

SO Jpn. Kokai Tokkyo Koho, 6 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM C09D005-02

ICS C09D003-46; C09D005-00

CC 42-13 (Coatings, Inks, and Related Products)

Section cross-reference(s): 51

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 62285963	A2	19871211	JP 1986-130798	19860605
	JP 63019546	B4	19880422		

AB The title coating materials comprise an aq. resin **emulsion** and  
an aq. **asphalt emulsion**. A 50% solids 65:35 Bu  
acrylate-styrene copolymer **emulsion** was mixed 25:75 with CPE-1  
**asphalt emulsion** and thinned 1:2 with water to give a  
coating material. A 2.5-kg **coal** pile (surface area 0.1 m2) was  
**sprayed** to 3 kg/m2 with 1% aq. glycerol, dried, **sprayed**  
to 2 kg/m2 with the above coating material, dried at 20.degree. for 4  
days, and subjected to 900 mL rain at a rate of 100 mL/h. The rain  
penetration was 1 kg/m2, compared with 4 without the **asphalt**  
**emulsion** and 5 without the copolymer **emulsion**.

ST acrylic **asphalt** waterproofing **coal** pile

IT **Asphalt**

RL: USES (Uses)

(**emulsion**, contg. styrene copolymers, for waterproofing of  
**coal**)

IT **Coal**

RL: USES (Uses)

(waterproofing of, **asphalt emulsions** contg. styrene  
copolymers for)

IT Waterproofing

(agents, **asphalt emulsion** contg. styrene  
copolymers, for **coal**)

IT 9003-55-8, Butadiene-styrene copolymer 25767-47-9, Butyl  
acrylate-styrene copolymer

RL: USES (Uses)

(**asphalt emulsions** contg., for waterproofing of  
**coal**)

L3 ANSWER 5 OF 29 CAPLUS COPYRIGHT 2002 ACS

AN 1987:536176 CAPLUS

DN 107:136176

TI Stable lignosulfonate **emulsion**

IN Hollis, John W., Jr.; Layman, Linda M.

PA Reed Lignin, Inc., USA

SO U.S., 7 pp.

CODEN: USXXAM

DT Patent  
LA English  
IC ICM C08L097-02  
NCL 106123100  
CC 43-5 (Cellulose, Lignin, Paper, and Other Wood Products)  
Section cross-reference(s): 51

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4666522	A	19870519	US 1985-701121	19850213
AB	A stable lignosulfonate <b>emulsion</b> , useful as a binder, comprises an aq. dispersion of lignosulfonate-contg. material having an initial solids concn of .apprx.45-65 wt.%, and .apprx.1-50 parts/100 parts of the lignosulfonate-contg. material of a hydrophobe, e.g., wax, oil, fat, and/or <b>asphalt</b> . <b>Spray</b> drying the <b>emulsion</b> provides a powder which is less dusty than comparable lignosulfonate products, and which upon rewetting, provides a stable <b>emulsion</b> . A 5% lignosulfonate-no. 6 oil <b>emulsion</b> was used as a binder for <b>coal</b> briquets showing initial compressive strength 79 psi, compared with 37 psi for briquets contg. Ca lignosulfonate alone.				
ST	lignosulfonate <b>emulsion</b> binder stability; oil lignosulfonate <b>emulsion</b> binder briquet; wax lignosulfonate <b>emulsion</b> binder stability; fat lignosulfonate <b>emulsion</b> binder stability; <b>asphalt</b> lignosulfonate <b>emulsion</b> binder stability				
IT	Fuel briquets ( <b>coal</b> , manuf. of, binders for, lignosulfonate-oil <b>emulsions</b> as)				
IT	<b>Asphalt</b> Hydrocarbon oils Paraffin oils Paraffin waxes and Hydrocarbon waxes, uses and miscellaneous Soybean oil Tallow RL: USES (Uses) ( <b>emulsions</b> with lignosulfonates, binders, with improved stability)				
IT	Pulping liquors, uses and miscellaneous RL: USES (Uses) (spent, <b>emulsions</b> with oils, binders, with enhanced stability, for <b>coal</b> briquets)				
IT	8061-52-7, Calcium lignosulfonate		8061-53-8		
	RL: USES (Uses) ( <b>emulsions</b> with oils, binders, with enhanced stability, for <b>coal</b> briquets)				

L3 ANSWER 6 OF 29 CAPLUS COPYRIGHT 2002 ACS  
AN 1987:8798 CAPLUS  
DN 106:8798  
TI **Coal** ash solid board for pavement  
IN Torio, Akira; Kamei, Yoshihiro; Hanami, Koji  
PA Sumitomo Construction Co., Ltd., Japan; Hokuden Kogyo K. K.  
SO Jpn. Kokai Tokkyo Koho, 2 pp.  
CODEN: JKXXAF

DT Patent  
LA Japanese  
IC ICM E02D003-12  
ICS C09K017-00  
CC 58-4 (Cement, Concrete, and Related Building Materials)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 61172918	A2	19860804	JP 1985-11984	19850125

AB Coal ash is mixed with water, compacted, solidified, **spray**-coated with **asphalt emulsion** at 0.5-1.2 L/m<sup>2</sup>, cured and used for pavement. The **asphalt** coating prevents water penetration through the **coal** ash board.

ST **coal** ash board pavement; **asphalt** coating ash board pavement

IT Coating materials  
(**asphalt**, on **coal** ash boards, for pavement)

IT Pavements and Roads  
(**coal** ash boards for, **asphalt**-coated)

IT Ashes (residues)  
(**coal**, board, with **asphalt** coating, for pavements)

IT **Asphalt**  
RL: USES (Uses)  
(coatings, on **coal** ash boards, for pavements)

L3 ANSWER 7 OF 29 CAPLUS COPYRIGHT 2002 ACS  
AN 1985:544693 CAPLUS  
DN 103:144693  
TI Moisture control in **coal** during outdoor storage  
PA Sumikin Chemical Engineering Co., Ltd., Japan  
SO Jpn. Kokai Tokkyo Koho, 3 pp.  
CODEN: JKXXAF  
DT Patent  
LA Japanese  
IC ICM B65G003-02  
ICS B65G069-20; C10L005-00  
CC 51-24 (Fossil Fuels, Derivatives, and Related Products)  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 60061403	A2	19850409	JP 1983-167216	19830909

AB The water content of **coals** stored outside in piles is controlled by applying an **emulsion** of **asphalt** contg. 1-10% pulverized coke. Thus, a **coal** pile (10 tons) was **sprayed** at the rate of 2 L/m<sup>2</sup> with an **asphalt emulsion** contg. 3% of 53-76 .mu. pulverized coke. After 60 days, the water content of the **coal** pile remained almost unchanged, but a similar **coal** pile **sprayed** only with an **asphalt emulsion** exhibited an increase in water content.

ST **coal** moisture control **asphalt emulsion**; coke pulverized **coal** moisture control

IT **Asphalt**  
RL: USES (Uses)  
(**emulsions**, contg. pulverized coke, for moisture control in outdoor storage of **coal**)

IT Coke  
RL: USES (Uses)  
(pulverized, **asphalt emulsions** contg., for moisture control in outdoor storage of **coal**)

IT **Coal**  
RL: USES (Uses)  
(storage of, moisture control in, **asphalt emulsions** contg. pulverized coke for)

L3 ANSWER 8 OF 29 CAPLUS COPYRIGHT 2002 ACS  
AN 1985:223290 CAPLUS  
DN 102:223290  
TI Moisture-controlling **emulsion** for outdoor storage of **coal**  
PA Sumikin Kako Co., Ltd., Japan  
SO Jpn. Kokai Tokkyo Koho, 3 pp.



CODEN: JKXXAF  
DT Patent  
LA Japanese  
IC ICM C10L005-00  
ICA B65G003-02; C09K003-18; C09K003-22  
CC 51-24 (Fossil Fuels, Derivatives, and Related Products)  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 59226095	A2	19841219	JP 1983-100045	19830603
AB	An <b>asphalt emulsion</b> for prevention of moisture uptake of <b>coal</b> stored outdoors in piles (diam. <25 mm) contains <20 wt.% <b>coal</b> tar. Thus, a cationic <b>asphalt emulsion</b> was <b>sprayed</b> (2 L/m <sup>2</sup> ) over a 10 t <b>coal</b> pile. The increase in moisture content after 60 days were from 9.0-9.1 wt.% to 9.5 wt.% with and to 10.6 wt.% without the <b>spray</b> .				
ST	<b>asphalt emulsion coal</b> tar storage; moisture content control <b>coal</b> storage				
IT	<b>Asphalt</b> RL: USES (Uses) ( <b>emulsions</b> of, with <b>coal</b> -tar, for moisture control of <b>coal</b> during storage)				
IT	<b>Coal</b> RL: USES (Uses) (outdoor storage of, moisture content of, control of, <b>emulsions</b> for)				
IT	<b>Tar</b> RL: USES (Uses) ( <b>coal</b> , <b>emulsion</b> of, with <b>asphalt</b> , for moisture control of <b>coal</b> during storage)				

L3 ANSWER 9 OF 29 CAPLUS COPYRIGHT 2002 ACS  
AN 1984:574468 CAPLUS  
DN 101:174468  
TI Emulsified fuels of viscous oils  
PA Toyo Rubber Industry Co., Ltd., Japan; Kawasaki Heavy Industries, Ltd.  
SO Jpn. Tokkyo Koho, 7 pp.  
CODEN: JAXXAD

DT Patent  
LA Japanese  
IC F23C011-00; F23D011-06; C10L001-32  
CC 51-12 (Fossil Fuels, Derivatives, and Related Products)  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 59025121	B4	19840614	JP 1973-28286	19730310
AB	Emulsified fuels contg. viscous oil 20-80, water 20-80, and surfactant 0.001-5 wt.%, are stable at <100.degree., have low viscosity, emit low levels of NOx upon combustion, and achieve nearly complete combustion without soot generation. Thus, 200 parts aq. polyoxyethylene nonylphenyl ether sulfate Na salt [9014-90-8] (3 wt.% soln.) at 60-80.degree. was mixed with 200 parts <b>asphalt</b> (specific penetration 80-100) at 100-120.degree. and stirring at 3000 rpm. The <b>emulsion</b> had viscosity 4000 cP at 30.degree. and the droplet diam. of dispersed phase was .apprx.6 .mu.. The combustion of the <b>sprayed</b> fuel at excess air ratio 1.1-1.3:1 did not generate soot; the concn. of NOx in the flue gas was 220-250 ppm.				
ST	fuel <b>emulsion</b> viscous oil; combustion fuel <b>emulsion</b> ; surfactant fuel <b>emulsion</b> ; nitrogen oxide fuel <b>emulsion</b> combustion; soot fuel <b>emulsion</b> combustion				
IT	Glycerides, uses and miscellaneous RL: USES (Uses)				

(dispersants, for fuel **emulsions**)

IT Pitch  
**Asphalt**  
 Paraffin oils  
 Waxes and Waxy substances  
 RL: USES (Uses)  
 (**emulsions** contg., as low-viscosity fuels, manuf. and combustion of)

IT Combustion  
 (of emulsified fuels)

IT Tar  
 RL: USES (Uses)  
 (**coal, emulsions** contg., as low-viscosity fuels, manuf. and combustion of)

IT Petroleum products  
 (heavy oils, emulsified fuels contg., manuf. and combustion of)

IT 67-56-1, uses and miscellaneous 107-21-1, uses and miscellaneous  
 9002-89-5 9005-38-3 9014-90-8 9016-45-9  
 RL: USES (Uses)  
 (dispersants, for fuel **emulsions**)

IT 11104-93-1, uses and miscellaneous  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (in flue gases, from combustion of emulsified fuels, redn. of)

L3 ANSWER 10 OF 29 CAPLUS COPYRIGHT 2002 ACS  
 AN 1980:200778 CAPLUS  
 DN 92:200778  
 TI Coating preventing autoignition of **coal**  
 IN Novak, Ladislav  
 PA Czech.  
 SO Czech., 2 pp.  
 CODEN: CZXXA9  
 DT Patent  
 LA Czech  
 IC E21F005-06  
 CC 51-21 (Fossil Fuels, Derivatives, and Related Products)  
 Section cross-reference(s): 59

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	CS 180529	B	19790915	CS 1976-4313	19760630
AB	<b>Coal</b> seams in deep mines are <b>sprayed</b> or painted with an adhesive mixt. contg. thermal-insulating and fire-extinguishing components, to prevent autoxidn. and fire. E.g., a suspension of casein 12.5 in water 60 contg. 24% aq. NaOH 2.5 parts was treated successively at 20-30.degree. with 3:2 NaNO <sub>2</sub> -K <sub>2</sub> HPO <sub>4</sub> 5, varnish 2.5, urotropine [100-97-0] 16, graphite 7, and an <b>asphalt-latex emulsion</b> 50 parts. Prior to application, the mixt. was homogenized with 150-90 parts cement.				
ST	safety <b>coal</b> mine coating; ignition <b>coal</b> mine preventive; casein <b>coal</b> mine coating fire; nitrite <b>coal</b> coating fire; latex <b>coal</b> coating fire; <b>asphalt coal</b> coating fire				
IT	<b>Coal</b> RL: RCT (Reactant) (autoignition of, coating materials for prevention of)				
IT	Cement Latex <b>Asphalt</b> Caseins, uses and miscellaneous RL: USES (Uses) (coating materials contg., for prevention of autoignition of				

coal seams)  
 IT Coating materials  
 (for prevention of autoignition of **coal** seams, manuf. of)  
 IT Fire  
 (prevention of, in **coal** seams, coating materials for)  
 IT Mines  
 (**coal**, autoignition in, coating materials for prevention of)  
 IT Ignition  
 (spontaneous, of **coal** seams, coating materials for prevention of)  
 IT 100-97-0, uses and miscellaneous 1310-73-2, uses and miscellaneous  
 7632-00-0 7758-11-4 7782-42-5, uses and miscellaneous  
 RL: USES (Uses)  
 (coating materials contg., for prevention of autoignition of **coal** seams)

L3 ANSWER 11 OF 29 CAPLUS COPYRIGHT 2002 ACS  
 AN 1980:79353 CAPLUS  
 DN 92:79353  
 TI Control of dust during **coal** transportation  
 IN Doeksen, Gerard  
 PA Cominco Ltd., USA  
 SO U.S., 5 pp.  
 CODEN: USXXAM  
 DT Patent  
 LA English  
 IC B65B033-00  
 NCL 427155000  
 CC 51-21 (Fossil Fuels, Derivatives, and Related Products)  
 Section cross-reference(s): 43

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4169170	A	19790925	US 1977-765033	19770202
	AU 7727682	A1	19790208	AU 1977-27682	19770805
PRAI	CA 1974-196405		19740329		
	US 1975-559102		19750317		
	US 1977-765033		19770202		

AB **Coal** is protected against loss due to wind during rapid movement of an open-top hopper car by **spraying** with an aq. compn. contg. .gtoreq.2.5% of a binder and 0.1-2.0% of water-sol. ethoxylated alkylphenol or sulfosuccinate wetting agent to form a protective layer. The binder consists of a solid material in aq. suspension of **asphalt emulsion** or black liquor lignin product. Thus, **coal** transported .apprx.700 mi by rail cars was treated with a compn. contg. 30% **asphalt** and 0.25% Dowell 600 [72674-06-7]. The protective layer (2.5 in.) formed at the end of the run was very strong. The layer showed a few cracks (1/16 in. wide) only during the last 100 mi of the run.

ST **coal** transportation dust control; wetting agent **coal spraying**; **asphalt emulsion** binder **coal** transportation; lignin binder **coal** transportation; alkylphenol ethoxylated wetting agent **coal**; sulfosuccinate wetting agent **coal**

IT **Asphalt**  
 RL: USES (Uses)  
 (binders, for dust control in **coal** transportation)

IT **Coal**  
 RL: USES (Uses)  
 (transportation of, dust control in, binder and wetting agent for)

IT 8061-51-6 8061-53-8  
 RL: USES (Uses)

(binders, for dust control in **coal** transportation)  
 IT 577-11-7 72674-06-7  
 RL: USES (Uses)  
 (wetting agent, for dust control in **coal** transportation)  
 IT 25322-68-3D, alkylphenyl ethers  
 RL: USES (Uses)  
 (wetting agents, for dust control in **coal** transportation)

L3 ANSWER 12 OF 29 CAPLUS COPYRIGHT 2002 ACS  
 AN 1976:76737 CAPLUS  
 DN 84:76737  
 TI Dust preventives containing **asphalt emulsions**  
 IN Ozaki, Hiromi; Tokairen, Toshio  
 PA Nippon Mining Co., Ltd., Japan  
 SO Japan. Kokai, 9 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 NCL 13(9)E6; 86(3)D312.1  
 CC 51-10 (Fossil Fuels, Derivatives, and Related Products)  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 50040491	A2	19750414	JP 1973-88061	19730807
	JP 59018431	B4	19840427		

AB Compns. of **asphalt emulsion** 70-95, polyethylene glycol alkylphenyl ether [having hydrophilic-lipophilic balance (HLB) 12-15] 2-5, and diethylene glycol alkyl ether, alc. or glycol (<C5), or alicyclic alc. (<C7) >0.5% are dild. with H2O and applied to **coal** or ores to prevent dust. Thus, 90 parts of **asphalt emulsion** from straight **asphalt** 65, Na dodecylbenzenesulfonate 0.5, NaOH 0.1, and H2O 34.4% and 10 parts of a mixt. of polyethylene glycol nonylphenyl ether [9016-45-9] (HLB 12-15) 40, diethylene glycol Bu ether [112-34-5] 10, and H2O 50% were mixed to give a dust-preventing compn. The mixt. was dild. with 100 parts H2O and **sprayed** onto powd. **coal** to 3 l./m2. The mixt. wetted the powder well and formed a weathering-resistant, dust-preventing layer.

ST dust preventive **asphalt emulsion**; **coal** dust prevention; ore dust prevention; **asphalt emulsion** dust preventive

IT Coating materials

(**asphalt emulsions**, contg. glycol ethers, for **coal**)

IT **Emulsions**

(**asphalt**-water, contg. glycol ethers, for prevention of dust on **coal**)

IT **Coal**

RL: USES (Uses)

(dust-preventing **sprays** for, contg. **asphalt emulsions**)

IT **Asphalt**

RL: USES (Uses)

(**emulsions** contg. glycol ethers and aq., dust-preventing **sprays**, for **coal**)

IT 112-34-5 9016-45-9

RL: USES (Uses)

(**asphalt**-water **emulsions** contg., for prevention of dust on **coal**)

L3 ANSWER 13 OF 29 CAPLUS COPYRIGHT 2002 ACS  
 AN 1973:455729 CAPLUS  
 DN 79:55729

TI Coal dust scattering preventative  
 IN Fujii, Kosaku; Adachi, To; Tsukada, Yuichi; Okuda, Ken; Suzuki, Hiroyuki  
 PA Nihon Koken Kogyo Co., Ltd.  
 SO Jpn. Kokai Tokkyo Koho, 5 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 NCL 13(9)E6  
 CC 52-7 (Coal and Coal Derivatives)  
 Section cross-reference(s): 59

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 48024983	B4	19730331	JP 1971-58950	19710804
AB	An <b>emulsion</b> consisting of <b>coal</b> tar, <b>asphalt</b> , or heavy oil, a small amt. of fatty acid pitch, surfactant, and water is useful for preventing dusting and weathering of materials stored in the open air such as <b>coals</b> , ores, and oil cokes. The <b>emulsion</b> does not affect the properties of the materials when they are used for coking or in a blast furnace. Thus, <b>coal</b> tar 77, <b>asphalt</b> 19, fatty acid pitch 4, Na oleate type emulsifier 1 and a nonionic <b>emulsion</b> stabilizing agent 0.1% were mixed in water to obtain an <b>emulsion</b> contg. 40% water. When the <b>emulsion</b> was <b>sprayed</b> (4 l./m2) on powd. <b>coal</b> , scattering of <b>coal</b> dust was effectively prevented for 25-35 days; a conventional <b>spray</b> (60:40 <b>coal</b> tar-water) was effective for .apprx.15 days.				
ST	<b>coal</b> storage coking <b>emulsion</b> ; ore storage coking <b>emulsion</b> ; <b>coal</b> tar <b>emulsion</b> coating				
IT	<b>Coal</b> Coke Ores and Ore deposits RL: USES (Uses) (control of dust and weathering of, tar <b>emulsion</b> for)				
IT	Dust (control of, tar <b>emulsions</b> for, on <b>coal</b> and ore)				
IT	<b>Asphalt</b> Tar RL: USES (Uses) ( <b>emulsions</b> , for control of dust and weathering of <b>coal</b> and ore)				
IT	Pitch (fatty acid, tar <b>emulsions</b> contg., for control of dust and weathering of <b>coal</b> and ore)				
IT	<b>Emulsions</b> (tar, for control of dust and weathering of <b>coal</b> and ore)				

L3 ANSWER 14 OF 29 CAPLUS COPYRIGHT 2002 ACS  
 AN 1973:100290 CAPLUS  
 DN 78:100290  
 TI Prevention of self-combustion in thermally treated coke briquets  
 IN Cieckiewicz, Edward  
 PA Instytut Chemicznej Przerobki Wegla  
 SO Pol., 2 pp.  
 CODEN: POXXA7

DT Patent  
 LA Polish  
 IC C10L  
 CC 52-8 (Coal and Coal Derivatives)

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI PL 65254 19720630 PL 19690505  
 AB Before heating briquets in a tunnel oven they are **sprayed** with a molten binder or an **emulsion** contg. 10-70% **coal** tar, pitch or **asphalt** oil and water.  
 ST coke briquetting combustion prevention  
 IT Coke  
 RL: USES (Uses)  
 (briquets, calcination of, spontaneous ignition prevention in)  
 IT Pitch  
**Asphalt**  
 Tar  
 RL: USES (Uses)  
 (coke briquet spontaneous ignition prevention by, in calcination)  
 IT Briquets, fuel  
 (coke, calcination of, spontaneous ignition prevention in)  
 IT Ignition  
 (spontaneous, prevention of, in calcination of coke briquets)

L3 ANSWER 15 OF 29 CAPLUS COPYRIGHT 2002 ACS

AN 1972:27316 CAPLUS

DN 76:27316

TI Coating of ore pellets with bituminous **emulsions** to prevent abrasive degradation

IN Bremer, Edward R.; Ripple, Robert M.

PA Chevron Research Co.

SO U.S., 5 pp.

CODEN: USXXAM

DT Patent

LA English

IC C21B; C22B

NCL 117100000B

CC 54 (Extractive Metallurgy)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 3619263	A	19711109	US 1968-784482	19681217
AB	Improved abrasion resistance of metallic ore pellets is achieved by coating the pellets at <750.degree.F with 0.1-0.3 wt. % solids relative to the pellet wt. by using an aq. <b>emulsion</b> of a bitumen having an ASTM-D-5-65 penetration at 77.degree.F of 0-50. Suitable bitumens include various <b>asphalt</b> residues, airblown <b>asphalts</b> , solvent extracts, <b>coal</b> tar pitches. etc. <b>Emulsions</b> which are effective include those prepd. with cationic, anionic, or nonionic emulsifiers, e.g. salts of fatty amines (tallow 1,3-propylenediamine salt), the quaternary ammonium salts (diethylmethyldo-decylammonium chloride), glycerol mono-, di- and trilaurates, ethoxylated salts of nonylphenol, fatty acid soaps, rosin soaps, casein, procein, etc. Various methods may be used to coat the pellets as by direct <b>spraying</b> of the pellets in free-falling streams.				
ST	ore bituminous coating; abrasive degradation ore redn				
IT	Iron ores, uses and miscellaneous				
	RL: USES (Uses) (coating of pellets of, with bituminous <b>emulsion</b> , for abrasion resistance)				
IT	Bitumens				
	RL: PROC (Process) (coating with, on iron ore pellets, for abrasion resistance)				
IT	Pellets				
	(iron ore, coating by bituminous <b>emulsions</b> of, for abrasion resistance)				
IT	12249-26-2				
	RL: PROC (Process)				

(coating of pellets of, by bituminous **emulsions**, for abrasion resistance)

L3 ANSWER 16 OF 29 CAPLUS COPYRIGHT 2002 ACS

AN 1967:446197 CAPLUS

DN 67:46197

TI Possibilities of utilizing petroleum **asphalts** in molding mixtures for gray iron castings

AU Dlezek, Josef

CS Statni Vyzkumny Ustav Mater., Brno, Czech.

SO Slevarenstvi (1967), 15(4-5), 189-95

CODEN: SLEVAK

DT Journal

LA Czech

CC 55 (Ferrous Metals and Alloys)

AB Aq. suspensions and **emulsions** of petroleum **asphalts** as addns. in molding mixts. were examd. By the addn. of 1-2% **asphalt**, the dry strength of the mixts. increased 11-14 kg./cm.2, and the resistance of the mixts. to the formation of scabs and sand inclusions was considerably improved. Addns. to the mixts. or as **sprayings** of green molds improve the surface of the castings and permits replacing foundry **coal** dust. The suspension can also be added to CO2 mixts.

ST **ASPHALTS** MOLDING MIXTS; CAST IRON MOLDS; GRAY CAST IRON MOLDS; PETROLEUM **ASPHALTS** MOLDING MIXTS

IT Molds (forms)

(**asphalt** suspensions in, for gray iron)

IT **Asphalt**

RL: USES (Uses)

(suspensions, in mold compns. for gray iron)

L3 ANSWER 21 OF 29 CAPLUS COPYRIGHT 2002 ACS

AN 1952:37536 CAPLUS

DN 46:37536

OREF 46:6366h

TI **Asphalt emulsion spray** for rendering **coal** dustproof

IN Rosencranse, Charles R.

PA Joe F. Klaner, Jr.

DT Patent

LA Unavailable

CC 21 (Fuels and Carbonization Products)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 23462		19520212	US	
AB	A reissue of U.S. patent 2,431,891 (C.A. 42, 1734g).				

L3 ANSWER 22 OF 29 CAPLUS COPYRIGHT 2002 ACS

AN 1948:7917 CAPLUS

DN 42:7917

OREF 42:1734g-h

TI Asphaltic **emulsion**

IN Rosencranse, Charles R.

PA Joe F. Klaner, Jr.

DT Patent

LA Unavailable

CC 22 (Petroleum, Lubricants, and Asphalt)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2431891		19471202	US	

AB **Asphalt**, processed to give a penetration of 26-30 and a m.p. 210-260.degree.F., is heated to 300.degree.F. and run through a colloid mill in contact with an aq. dispersion which has been heated to 180.degree.F., the final temp. of the **emulsion** being rapidly reduced to 150.degree.F. The aq. dispersion is of the following compn.: H2O 95.04, petroleum-hydrocarbon-insol. pine-wood resin 3.0, bentonite clay 1.4, tall oil 0.10, and caustic soda 0.46%. The **sprayed** colloidal-**asphalt** suspension renders **coal** dustproof, impervious to moisture and oxidation, and prevents weathering and slacking of **coal**.

L3 ANSWER 25 OF 29 CAPLUS COPYRIGHT 2002 ACS

AN 1939:42913 CAPLUS

DN 33:42913

OREF 33:6078a-c

TI Soap-what new uses?

AU Smith, Paul T.

SO Soap (1939), 15(No. 6), 24-6

DT Journal

LA Unavailable

CC 27 (Fats, Fatty Oils, Waxes, and Detergents)

AB A promising new use for soap lies in the production of dustproofing fluids for the treatment of **coal** at the pithead. Soap has also been tried out as an emulsifying agent for the prepn. of colloidal fuels made from pulverized **coal** or pitch and heavy mineral oil. In the prepn. of many **asphalt** compns. soap is used for dispersing the bitumen. A favorite method is to emulsify with the aid of soap and then to stabilize the **emulsion** with a sol. protein such as blood albumin. Still other uses for soap are found in the manuf. of sponge-rubber and imitation leather. Oleates of Mg and Sn are useful addns. to lubricants such as bearing greases in which they reduce wear. Fabrics are rendered water-resistant by a resin condensation product applied in aqueous dispersion, made up of H2O-sol. soaps and the necessary aldehyde, ketone and amide resins. In the paper industry soap is used in the manuf. of a new starch sizing for paper pulp. The insecticide industry uses soap for making **sprays**.